

### **ABSTRACT**

Systems and methods for providing multiple pass continuous flow dialysis therapy are provided. The present invention includes a fluid circuit connected to a patient via a catheter thereby defining a fluid loop along which a therapy fluid  
5 including a dialysate can be continuously circulated into, through and out of a peritoneal cavity of a patient to remove a therapeutically effective amount of excess water and solutes including uremic toxins. The feed rate and discharge rate of therapy fluid into the fluid loop can be controllably regulated in proportion to the circulation rate of fluid in the fluid loop such that the therapy fluid can pass a multiple number of  
10 times along the fluid loop prior to discharge.